

**REMARKS**

Claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103 are currently pending in the present application. The Examiner has rejected all of the pending claims. Claims 1, 19, 35, 53, and 87 have been amended to correct a minor typographical error.

At the outset, Applicants are submitting herewith English abstracts for DE 4142271 and FR 2688511 in order to comply with M.P.E.P §609. Accordingly, Applicants respectfully request that these references be considered in the present application.

A. Rejections Under 35 U.S.C. §102(a)/103(a)

Claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative obvious over *Babrowicz* (WO 97/36741). In addition, claims 22, 37, 56, 71 and 90 stand rejected under 35 U.S.C §103(a) as being unpatentable over *Babrowicz*. Applicants respectfully traverse these rejections and request withdrawal of the same.

The present invention is directed to a polymer blend for fabricating monolayer or multilayer films. The blend includes a first component which is an ethylene and  $\alpha$ -olefin copolymer having a density of less than about 0.915 g/cc in an amount from about 99% to about 55% by weight of the blend. The blend also includes a second component which is a propylene and  $\alpha$ -olefin copolymer, wherein the  $\alpha$ -olefin has 2 carbons in an amount by weight from about 45% to about 1%. The blend when fabricated into a film has a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils. The film is capable of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

1. *Babrowicz* Does Not Anticipate 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631 (Fed. Cir. 1981) (emphasis added). Moreover, “The identical invention must be shown in complete detail as is contained in the...claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989) (emphasis added). *Babrowicz* discloses a polymeric crosslink enhancer (PCE) which is formed from monomeric units derived from a) at least one polyene monomer, b) at least one C<sub>2</sub>-C<sub>20</sub> olefinic monomer; and optionally c) at least one or more copolymerizable monomers other than a or b. See page 12 at lines 13-16. *Babrowicz* discloses using a polyolefin such as metallocene generated ethylene/octene copolymer having a density of 0.901 and a polyene such as ethylidene norbornene (EB) to form an ethylene propylene diene monomer (EPDM). See page 12, line 19 – page 14, line 18. As discussed above, the present invention is directed to a blend which includes an ethylene and  $\alpha$ -olefin copolymer with 4-8 carbons having a density of less than about 0.915 g/cc and a propylene and  $\alpha$ -olefin copolymer, wherein the  $\alpha$ -olefin has 2 carbons.

Applicants respectfully assert *Babrowicz* not only fails to anticipate the claimed invention but also teaches away from it. As is well known to one skilled in the art, the polyenes in *Babrowicz* are clearly different from the propylene and  $\alpha$ -olefin copolymer used in Applicants' blend. For example, EPDM is a terpolymer since it comprises three components, ethylene, propylene and diene. In contrast Applicants' second component is an ethylene and  $\alpha$ -olefin copolymer. Moreover, EPDM is in the ethylene-propylene family of rubbers and includes two carbon-carbon double bonds, and thus has a significantly different structure and properties than Applicants' component. In fact, *Babrowicz* encourages unsaturation of the PCE by using a high polyene content. See page 24, lines 6-25. Accordingly, Applicants respectfully request that the rejection of claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103 on the basis of 35 U.S.C. §102(b) be withdrawn.

2. *Babrowicz* Does Not Render Claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103 Obvious.

In addition to the above, the Examiner has also rejected claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103 under 35 U.S.C. §103(a) as being unpatentable over *Babrowicz*. Applicants respectfully assert this rejection is in error and request a withdrawal of the same.

To establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be a suggestion or motivation to modify the prior art reference, (2) the prior art reference must teach or suggest all of the claim limitations of the claimed invention, and (3) there must be a reasonable expectation of success. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants submit that none of the foregoing three criteria have been satisfied.

There is no suggestion or motivation to modify the teachings of *Babrowicz* in order to reach Applicants claimed blend. *Babrowicz* teaches a specific blend of polymers for making a PCE. There is no teaching or suggestion for making a blend using an ethylene and  $\alpha$ -olefin copolymer having 4-8 carbons and a density of less than about 0.915 g/cc in combination with a propylene and  $\alpha$ -olefin copolymer, wherein the  $\alpha$ -olefin has 2 carbons. As discussed above, *Babrowicz* merely relates to using various polyenes in conjunction with ethylene and  $\alpha$ -olefin copolymers to form EPDMs. Accordingly, based on the above, Applicants assert the Examiner has failed to present a *prima facie* case of obviousness, and Applicants respectfully request a withdrawal of this rejection of claims 1, 16, 18-27, 33, 34, 35-42, 48-51, 52-61, 67, 68, 84, 86-95, and 101-103.

3. *Babrowicz* Does Not Render Claims 22, 37, 56, 71, and 90 Obvious.

Claims 22, 37, 56, 71 and 90 stand rejected under 35 U.S.C §103(a) as being unpatentable over *Babrowicz*. Because this reference does not teach or suggest the claimed invention for reasons set forth above, the Examiner has again failed to present a *prima facie* case of obviousness. Accordingly, Applicants submit that claims 22, 37, 56, 71, and 90 are patentably distinguishable over this reference.

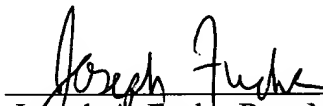
**CONCLUSION**

In view of the foregoing remarks, Applicants submit that all pending claims are in a condition for allowance and respectfully requests a notice of the same.

Respectfully submitted,  
BELL, BOYD & LLOYD LLC

Date: October 29, 2002

BY

  
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**MARKED-UP AMENDED CLAIMS FOR APPLICATION 09/526,357**

1. (Amended) A polymer blend for fabricating monolayer films or a layer within a multilayer film, the blend comprising:

a first component selected from the group of: (1) ethylene and  $\alpha$ -olefin copolymers having a density of less than about 0.915 g/cc, (2) ethylene copolymerized with lower alkyl acrylates, (3) ethylene copolymerized with lower alkyl substituted alkyl acrylates and (4) ionomers, the first component being present in an amount from about 99% to about 55% by weight of the blend;

a second component in an amount by weight of the blend from about 45% to about 1 % and consists of one or more polymers of the group: (1) propylene containing polymers, (2) polybutene polymers, (3) polymethylpentene polymers, (4) cyclic olefin containing polymers and (5) bridged polycyclic hydrocarbon containing polymers; and,

the blend when fabricated into a film having a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils, and the film being capable [or] of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

19. (Amended) The blend of claim 18 wherein the blend when fabricated into a film having a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils, and the film being capable [or] of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

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35. (Amended) A monolayer film comprising:

a first component selected from the group of: (1) ethylene and  $\alpha$ -olefin copolymers having a density of less than about 0.915 g/cc, (2) ethylene copolymerized with lower alkyl acrylates, (3) ethylene copolymerized with lower alkyl substituted alkyl acrylates and (4) ionomers, the first component being present in an amount from about 99% to about 55% by weight of the blend;

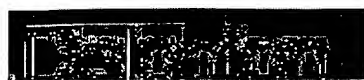
a second component in an amount by weight of the blend from about 45% to about 1 % and consists of one or more polymers of the group: (1) propylene containing polymers, (2) polybutene polymers, (3) polymethylpentene polymers, (4) cyclic olefin containing polymers and (5) bridged polycyclic hydrocarbon containing polymers; and,

the film has a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils, and the film being capable [or] of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

53. (Amended) The film of claim 52 has a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils, and the film being capable [or] of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

87. (Amended) The method of claim 86 wherein the film has a modulus of elasticity when measured in accordance with ASTM D882 of less than about 60,000 psi, an internal haze when measured in accordance with ASTM D1003 of less than about 25%, an internal adhesion ranking of greater than about 2, a sample creep at 120°C under 27 psi loading of less than or equal to 150% for a film having a thickness of from about 5 mils to about 15 mils, and the film

being capable [or] of being heat sealed into a container having seals wherein the seals remain intact when the container is autoclaved at 121°C for one hour.

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## Thermoplastic compsn. - contains polyolefin resin and co-polymer of vinyl acetate and/or acrylic resin, for film for high frequency welding

Assignee: **BENATRE G** Individual  
**SOCAPLAST SA** Non-standard company  
**TECHNOFILM** Non-standard company

Inventor: **BENATRE G;**

Accession / Update: **1993-370819 / 199743**

IPC Code: **C08L 23/06 ; C08J 5/18 ; C08L 23/08 ; C08L 31/04 ; C08L 33/08 ;**

Derwent Classes: **A18; A94;**

Manual Codes: **A04-F01**(General) , **A04-F09**(Vinyl acetate copolymers) , **A04-G01E**  
 (Uses) , **A07-A02C**(From aliphatic substituted monoolefinic monomers  
 not containing Nitrogen or halogen) , **A12-S06**(Films)

Derwent Abstract

### DERWENT RECORD

(FR2688511A) Thermoplastic compsn. contains (a) a polyolefin resin and (b) a copolymer contg. vinyl acetate and/or acrylic ester gps. with the wt. of the single gps. forming 10-30 wt.% of the total mixt.

Pref. the total wt. of the vinyl acetate and acrylic ester gps. contains at least 40 wt.% of acrylic ester, esp. 20-40% of vinyl acetate and 80-60% of acrylic ester. The total wt. of vinyl acetate and acrylic ester gps. forms 12-18 wt.% of the compsn.

**USE/Advantage** - The compsn. is used for films for prodn. of articles for high frequency welding, and replaces PVC in applications using flexible films, esp. in inflatable goods. The weldability can be adjusted according to the materials to be assembled or to the operating conditions.

In an example, 400 microns PVC film, inflated to 100 mbars, had lost 72% of the pressure after 13 days, whilst an ethylene/vinyl acetate 200 micron film contg. 15% of vinyl acetate lost 50% in 19 days.

Abstract info: **EP0644236B**: Dwg.0/0 , **FR2688511A**: Dwg.0/0

Family:

Patent	Pub. Date	DW Update	Pages	Language	IPC Code
<b>FR2688511A1</b> *	Sept. 17, 1993	199347	7	French	C08L 23/06
Local appls.: <b>FR1992000003266</b> ApplDate:1992-03-13 (92FR-0003266)					
<b>DE69308299E</b> #	April 03, 1997	199719		German	C08L 23/06
Local appls.: Based on <b>EP00644236</b> (EP 644236)					
<b>EP1993000420374</b> ApplDate:1993-09-17 (93EP-0420374)					
<b>DE1993000608299</b> ApplDate:1993-09-17 (93DE-0608299)					
<b>EP0644236A1</b> #	March 22, 1995	199516	4	French	C08L 23/06
Des. States: (R) AT BE CH DE DK ES GB GR IE IT LI LU NL PT SE					
Local appls.: <b>EP1993000420374</b> ApplDate:1993-09-17 (93EP-0420374)					
<b>EP0644236B1</b> =	Feb. 26, 1997	199714	3	French	C08L 23/06
Des. States: (R) AT BE CH DE DK ES GB GR IE IT LI LU NL PT SE					
Local appls.: <b>EP1993000420374</b> ApplDate:1993-09-17 (93EP-0420374)					



Priority Number:

Application Number	Application Date	Original Title
EP1993000420374	Sept. 17, 1993	High frequency weldable and film-formable by extrusion blend of polyolefin and EVA copolymer and/or ethylene-acrylic ester copolymer
DE1993000608299	Sept. 17, 1993	
FR1992000003266	March 13, 1992	MELANGE DE RESINE A BASE DE POLYOLEFINE ET DE COPOLYMER D'ETHYL VINYL ACETATE ET OU D'ETHYLENE-ESTER ACRYLIQUE, SUSCEPTIBLE D'ETRE EXTRUDE EN FILM ET SOUDE PAR DES COURANTS A HAUTE FREQUENCE.

Extended Polymer Index:


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Polymer Multipunch Codes:

[Show polymer multipunch codes](#)

Related Accessions:

Accession Number	Type	Derwent Update	Derwent Title
C1993-164480	C		
1 item found			

Title Terms: THERMOPLASTIC COMPOSITION CONTAIN POLYOLEFIN RESIN CO POLYMER  
POLYVINYL ACETATE POLYACRYLIC RESIN FILM HIGH FREQUENCY WELD [Pricing](#) [Current charges](#)

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## High-frequency welding of polyolefin-polyamide moulded prods. - with ad of coupling agent, esp. maleic anhydride-grafted olefin (co)polymer, to improve HF welding and mechanical properties

Assignee: **PCD PETROCHEMIE DANUBIA DEUT** Non-standard company  
 Inventor: **BERNREITNER K; STAUTNER H; WOLFSBERGER A;**

Accession / Update: **1993-206287 / 199326**

IPC Code: **C08J 5/12 ; B29C 65/04 ; C08J 5/18 ; C08L 23/02 ; C08L 51/06 ; C08L 77/00 ;**

Derwent Classes: **A17; A23; A35;**

Manual Codes: **A04-G01C(Fabrication) , A05-F01C(Fabrication) , A08-M01(Adhesion improvers, subbing agents, bonding aids) , A11-C01B(Heat sealing, welding, general)**

Derwent Abstract

### DERWENT RECORD

(DE4142271A) Welding thermoplastic moulded parts (I) involves welding the parts together in a high-frequency field; mouldings (I) contain mainly 5-94.5 wt.% polyolefin (II), 5-94.5 wt.% polyamide (III) and 0.5-50 wt.% coupling agent (IV).

Also claimed is film contg. 5-94.5 wt.% (II), 5-94.5 wt.% (III) and 0.5-50 wt.% maleic anhydride (MA)-grafted styrene-ethylene-butylene block copolymer. Addn. of (IV) gives polyolefin/polyamide mixts. with improved HF-welding properties and improved mechanical properties. (I) contain 10-80 wt.% (II), 10-60 wt.% (III) and 5-30 wt.% (IV), esp. MA-grafted polymers as above. Pref., (II) is PE, PP, polymethylpentene, EPDM, etc., (III) is PA 6 or 66, (IV) is, e.g., 'Admer' (RTM = MA-grafted PP) or 'Kraton' (RTM = MA-grafted block copolymer as above). Welding frequency is 20-50 MHz.

**USE/Advantage** - Useful in amts. of 0.5-100 wt.% in mixts. contg. 5-95 wt.% (II) and 5-95 wt.% (III), as an additive for improving the HF-weldability of mouldings produced from the mixts. Also claimed is the use of a maleic anhydride-grafted polypropylene and/or styrene-ethylene/butylene block copolymer as an additive in such mixts. (amts. as above), for improving the mechanical properties of film produced from the mixts.

Abstract info: **DE4142271A: Dwg.0/0**

Family:

Patent	Pub. Date	DW Update	Pages	Language	IPC Code
<b>DE4142271A1 *</b>	June 24, 1993	199326	6	German	C08J 5/12
Local apps.: <b>DE1991004142271</b> ApplDate:1991-12-20 (91DE-4142271)					

Priority Number:

Application Number	Application Date	Original Title
<b>DE1991004142271</b>	Dec. 20, 1991	VERFAHREN ZUM SCHWEISSEN VON AUS POLYOLEFINEN, POLYAMIDEN UND HAFTVERMITTLERN BESTEHENDEN FORMTEILEN DURCH HOCHFREQUENZSCHWEISSUNG, SOWIE FOLIEN AUS POLYOLEFINEN, POLYAMIDEN UND HAFTVERMITTLERN

Polymer Multipunch  
Codes:

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Related Accessions:

Accession Number	Type	Derwent Update	Derwent Title
C1993-091419	C		
1 item found			

Title Terms: HIGH FREQUENCY WELD POLYOLEFIN POLYAMIDE MOULD PRODUCT ADD COUPLE  
AGENT MALEIC ANHYDRIDE GRAFT OLEFIN CO POLYMER IMPROVE HF WELD  
MECHANICAL PROPERTIES

Index Terms: COPOLYMER HF

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